

ABSTRACT

A low-voltage, low-power, synchronous, bidirectional, time-multiplexed, serial communication, scalable system bus carrying a number of signals over a fewer number of wires between a master device and peripheral devices or between
5 peripheral devices. One of the wires carries a composite digital signal that includes a data signal and a synchronizing signal, though other combinations are contemplated. The system bus can support more peripheral devices than there are available time slots, and supports interrupt polling and servicing. In addition, peripheral devices that include an electro-mechanical or electro-acoustical component connected to the
10 system bus can also communicate directly to each other without using the system bus. The system bus can be implemented in low voltage, low power devices, including listening devices such as hearing instruments and headsets, portable telephones, and personal digital assistants.